Sickle Cell Anemia

Summary of Methods and Data for Estimate of Costs of Illness

1. Estimated Total Economic Cost	$ 0.9 billion
Estimated Direct Cost	$ 0.6 billion
Estimated Indirect Cost	$ 0.3 billion
Reference Year	1995
IC Providing the Estimate	NHLBI
Direct Costs Include: Other related nonhealth costs	No
Indirect Costs Include:	
Mortality costs	Yes
Morbidity costs: Lost workdays of the patient	No
Morbidity costs: Reduced productivity of the patient	No
Lost earnings of unpaid care givers	No
Other related nonhealth costs	No
Interest Rate Used to Discount Out-Year Costs	6 %

2. Category code(s) from the International Classification of Diseases, 9th Revision, Clinical Modification,(ICD-9-CM) for all diseases whose costs are included in this estimate: 282.6.
3. Estimate Includes Costs:

Of related conditions beyond primary, strictly coded ICD-9-CM category	No
Attributable to the subject disease as a secondary diagnosis	No
Of conditions for which the subject disease is an underlying cause	No

4. Population Base for Cost Estimate (Total U.S. pop or other)	Total U.S. pop.
5. Annual (prevalence model) or Lifetime (incidence model) Cost:	Annual
6. Perspective of Cost Estimate (Total society, Federal budget, or Other)	Total Society
7. Approach to Estimation of Indirect Costs	Human Capital

8. Source of Cost Estimate:

Unpublished. Contact Mr. Thomas Thom, NHLBI, 301-435-0710.

9. Other Indicators of Burden of Disease:

An estimated 72,000 Black Americans have this disease.

10. Commentary:

Direct cost estimates for sickle cell anemia in 1995 were estimated by allocating to sickle cell anemia a portion of the 1995 health expenditures for total blood diseases to be reported by Tom Hodgeon of the National Center for Health Statistics. The portion was determined from proportions (sickle cell anemia to all blood diseases) in the latest NCHS surveys of hospital days of care, physician office visits, and drug mentions in physician visits. Only the primary diagnosis of sickle cell anemia reported in the surveys was considered. Costs associated with sickle cell anemia as a comorbid condition to some other primary diagnosis were not included. Costs incurred by family or other personal caregivers for sickle cell anemia patients cannot be

estimated and were not included. The national health expenditures that cannot be allocated to diseases (e.g. construction and research) were not included in the sickle cell anemia direct costs.

There is no estimate of indirect cost of morbidity. The indirect mortality cost of sickle cell anemia in 1995 represents lost productivity based on lost earnings attributed to premature deaths from sickle cell anemia in that year. It was estimated by applying the numbers of sickle cell anemia deaths in 1993, by age and sex, reported from national vital statistics, to the age-sex estimates of the 1992 present value of lifetime earnings discounted at six percent. These lifetime values were reported in a cost study by Dorothy Rice. Estimated indirect mortality costs of sickle cell anemia were inflated from 1992 to 1995 based on a 5 percent per year inflation rate, estimated from Bureau of the Census estimates of mean earnings of workers. Sickle cell anemia deaths in 1993 were those where sickle cell anemia was the underlying cause of death regardless of what other contributing causes may have been present. Other deaths, where sickle cell anemia was a contributing cause, were not included. The accuracy of estimates of the present value of lifetime earnings has not been assessed by anyone at NHLBI; estimates were taken at face value.